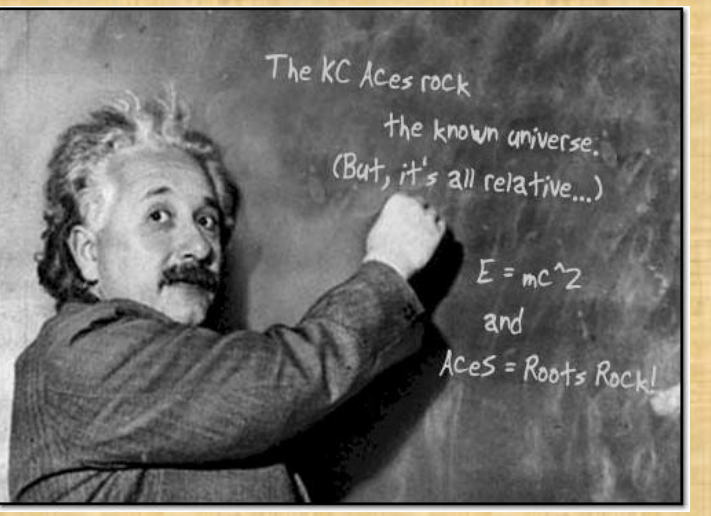
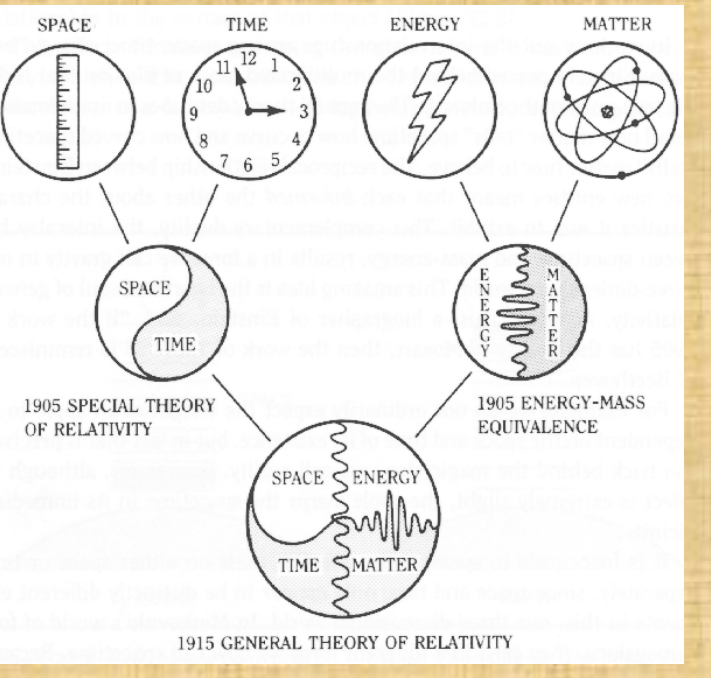
# 1905: Albert Einstein proposes the special theory of relativity

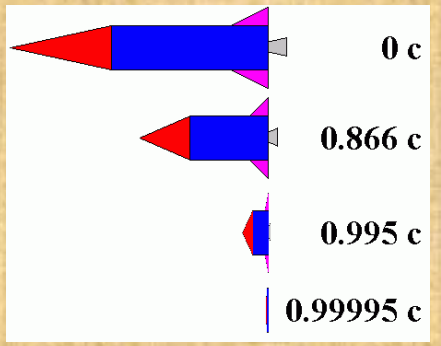



Albert Einstein (1879-1955)



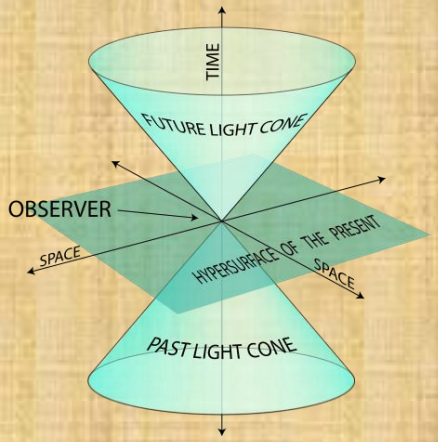

**Discovery:**

In 1905, Einstein wrote five articles and had them published in the prestigious *Annalen der Physik* (*Annals of Physics*). In one of these papers, "Zur Elektrodynamik bewegter Koerper" ("On the Electrodynamics of Moving Bodies"), Einstein detailed his Special Theory of Relativity.




**Importance:**

There were two main parts of his theory. First, Einstein discovered that the speed of light is constant. Secondly, Einstein determined that space and time are not absolutes; rather, they are relative to the position of the observer. He also determined the relationship between mass and energy. Not only are they not independent entities, which had been a long held belief, their relationship could be explained with the formula $E=mc^2$




**Applications:**

- GPS
- The equivalency between mass and energy (fission and fusion)
- It has changed dramatically physics at his time, and still has not lost ground.